R1 Eastside Zone Bat Inventory Project

BAT DETECTOR DEPLOYMENT SETUP (1)

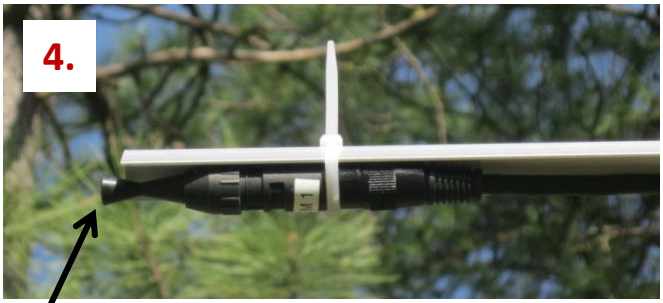
- The bat detector and accessories are stored in a plastic tackle box to protect them from weather. (2)

- An extendable painter pole is used to elevate the microphone above the ground and secure the external microphone cord.

- A piece of aluminum angle, bent 90 degrees, protects the external mic and electrical connections (3), secures the cord, and helps connect the set-up to the pole.

- Aluminum angle and cord are attached with reusable zip ties (no velcro) (4)

- Guy lines stabilize and secure the pole. Place guy lines at least 12 inches below microphone, to minimize noise disturbance



Horn should extend appox ¼ inch past angle aluminum

BAT DETECTOR DEPLOYMENT – EQUIPMENT LIST

*ITEMS HOUSED IN THE WATERPROOF BOX: (*The waterproof box is a plastic tool box with exit hole for mic cord)

- **Tool Box**
- **Pettersson D500x Bat detector**
- **One (1) to four (4), CF ca**rds, formatted and installed in slots in back of detector (install in order of slots... detector will not record if slots are not filled in proper order. ***REFER TO PETTERSSON GUIDE***)
- **External microphone cord**. Run cord through hole in box; store extra cord under detector in box
- **External battery** - charged
- **External battery cord**

TO ELEVATE THE EXTERNAL MICROPHONE:

- **External microphone**
- **6 to 12 foot extendable painter's pole -** for elevating microphone
- **aluminum angle** (24 to 36 -inch length; ¾" x 1/16"), bent at a 90 degree angle in the middle* – for protecting microphone from weather and extending away from the pole. Also for securing the microphone to the pole.
- **Reusable zip ties** – for securing microphone cable to pole. *DO NOT USE VELCRO*. Velcro makes noise which might be recorded by the detector
- **Rebar (18 - 24")** – to assist with set-up – duct tape the painter's pole to the rebar before for securing pole with guy lines. (Goal is for one person to set-up detector alone. I have also duct taped a length of PVC pipe to the rebar, and put the pole in it)
- **Rope -** for 3 guy lines to secure extension pole
- **3 Tent stakes** - for securing guy lines
- **Hammer** – for pounding rebar and tent stakes into the ground
- **Duct Tape**

DATA MANAGEMENT AND SUPPLIES:

- **GPS unit**
- **Camera**
- **Deployment data form**
- **Quick Start Guide**
- **Deployment Guide**

HANDY TO HAVE:

- **Knife and/or pliers**

*(simple microphone mounting brackets can be fashioned using aluminum angle iron. The angle provides cover for the electrical connections and enables extending the microphone away from echo-producing surfaces. The brackets are formed using ¾" x 1/16" aluminum angle and spray painted. For best results, use a pair of flat crescent wrenches or other pair of gripping tools to flair out the angle where you intend to make the bend. Use larger angles as appropriate for other microphones or for longer extension.)

SUGGESTED SEQUENCE FOR SET-UP

1) Connect cables to ports on the front of the D500x (microphone to “EXT MIC” and battery to “DC IN”). Make sure connections are firmly seated. When properly seated, you should be able to twist the outer plastic “ring”, “locking” the cable to the detector.
2) Verify CF cards are properly loaded and “power” toggle switch is in the “ext” position.
3) Connect the battery cable to the battery. Remember polarity, red = positive (+); black = negative (-).
4) Attach 3 guy lines to the pole. I like to put the lines just above the center “joint” of the pole.
5) Feed the external mic, with cable attached, through the hole in the tackle box.
6) Lay the angle aluminum on the ground and attach the mic with zip ties. The horn of the mic will protect the mic from weather and should extend about 1/4 past the angle. Make sure no dirt or debris gets into the microphone horn.
7) Attach the other end of the angle aluminum to the pole with zip ties, securing cord to the pole with the same ties. (*Keep rope out of way so you don’t zip it to the pole too.)*
8) Pick pole up and secure to rebar with duct tape or other method. This should hold pole in place while you attach the guy line.
9) Secure guy lines to ground using tent stakes.
10) Carefully extend the pole, making sure there is enough slack in the cord for the extension height. I keep pushing the rope down toward the center joint of the pole while extending it. Extend the pole until the microphone is 9 feet above the ground.
11) Secure the rest of the mic cord to the pole. Aim for 18-24 inches between zip ties. Avoid loose mic cord that could bang against the pole in a wind.
12) Place tackle box right next to the pole; pull and coil excess mic cord into box. Lay detector on top of coiled cord.
13) Double check detector settings and place detector in automatic recording mode.
14) CLOSE the tackle box.
15) If you anticipate some rodent activity, spray box and cored with lysol to discourage.
16) Complete the “**Deployment Data Sheet**”
17) Record GPS coordinates of deployment site
18) Take photographs of the deployment site, to demonstrate habitat
19) Mail CF cards and a copy of the **Deployment Data Sheet** to the ZIMB.

Setting Detector to Record:

- Press **ESC** to reach the Ready Screen (1). Confirm correct date and time setting is displayed at the bottom of the screen
- Press **REC** to display the Record Setting screen (2). Settings will vary for different detector location and deployment scenarios.
- Press **ENTER** to confirm settings and place detector in recording cycle mode. Screen will flash recording presets and then shut off. The small LED below the power symbol will flash every 5 seconds when the detector is set to automatically record.

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